



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/617,392      | 07/11/2003  | Minekazu Momiyama    | 240110US2           | 3322             |

22850 7590 09/23/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

|          |
|----------|
| EXAMINER |
|----------|

NGUYEN, THU V

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3661

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

212

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/617,392             | MOMIYAMA ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Thu Nguyen             | 3661                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/6/04 &amp; 8/19/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The response to the election/restriction requirement filed on August 30, 2004 has been entered. By this response, group I (claims 1-4) has been elected with traverse, accordingly, claims 1-4 are examined in this office action, claims 5-6 are withdrawn from consideration, and claims 1-6 are now pending in the application.

#### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be limited to a single paragraph within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al (US 4,718,685).

As per claim 1, 3, Kawabe teaches a vehicle operation control method for controlling an actual steering angle of driven wheels. The method comprises: obtaining steering angle  $\theta_s$  of the steering wheel (col.3, lines 35-37); controlling a variable gain ( $K_f$ ,  $K_r$ ) based on the vehicle side speed  $V_y^*$  which is determined from the vehicle velocity (col.9, lines 1-7); multiplying the steering angle with the variable gain  $K_f$ ,  $K_r$  (col.8, line 35); further, since Kawabe teaches controlling the actual steering angle of the driven wheel based on a result of the desired steer angle  $\delta R$  which is effected by the result of the multiplication of the value  $V_y^*$  (col.7, lines 1-6, lines 43-55; col.8, lines 35; col.9, lines 1-14; fig.3), Kawabe obviously teaches controlling steering angle of the driven wheels based on the result of the value  $V_y^*$ . Kawabe does not explicitly teach using the change amount of the steering angles and does not explicitly teach integrating the results of the multiplication. However, since Kawabe teaches obtaining the steering angle  $\theta_s$  from the steering angle sensor (col.3, lines 35-39), and since it would have been well known that the steering angle sensor determines the steering angle relative to the neutral position, Kawabe obviously encompasses teaching the change of the steering angle with respect to the neutral position. Furthermore, since Kawabe suggests performing integration on the time depending variables (col.6, lines 29-34; col.7, lines 43-47), and since the multiplication value  $V_y^*$  contains the time variable  $\theta_s$ , it would have been obvious to perform integration on the multiplication value  $V_y^*$  of Kawabe for suitable required accuracy of the variable.

4. Claims 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al (US 4,718,685) in view of Kawamuro et al (US 6,302,441).

As per claim 2, 4, Kawamuro suggests including variable gain being a transmission ratio (col.4, lines 53-67). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the variable gain of Kawabe to represent the transmission ratio taught by Kawamuro in order to reduce quick alteration of transmission ratio with the reduction of the vehicle speed as taught by Kawamuro in col.1, lines 21-27.

***Response to Arguments***

5. Applicant's election with traverse of group I in the reply filed on August 30, 2004 is acknowledged. The traversal is on the ground that no undue burden required because the claims directed to the same classes and subclasses. This is not found persuasive because although group I and group II are basically included in the same main class and subclasses 701/41, group I and group II requires searching in other different class and subclasses. For example, group I also requires searching at least in class 701/51, 61 directed to transmission control; while group II requires searching at least in class 180/410, 421, and 423 directed to steerable wheel with condition modulated steering or class 280/93.5, 771 directed to monitoring and indicating means and steering column or wheel in response to collision.

The requirement is still deemed proper and is therefore made FINAL.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Art Unit: 3661

**or faxed to:**

(703) 305-7687, (for formal communications intended for entry)

**Or:**

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451  
Crystal Drive, Arlington. VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The  
examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Thomas Black, can be reached on (703) 305-8233. The fax phone number for this  
Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Group receptionist whose telephone number is (703) 308-1111.



**THU V. NGUYEN**  
**PRIMARY EXAMINER**

September 17, 2003